CHAPTER II
SFWMD PERFORMANCE MEASURE VALUES

At least once every five years, the SFWMD must conduct an evaluation of its success in realizing the desired goals established in the DWMP. Such an evaluation cannot be accomplished using the activity-based information described in the previous chapter. It requires a performance-based assessment of the effectiveness of the various efforts undertaken by the SFWMD toward meeting long-term goals. To assist in the development of this annual report, the water management districts have committed to incorporate a series of performance measures that will provide an indication of their success in achieving the goals described in their respective DWMPs. In an effort to facilitate comparison of the five districts throughout the state, all of the districts have committed to using similar performance measures.

Different measures have been agreed upon to assess the impact of activities within each of the areas of responsibility identified in the DWMP: water supply, flood protection and floodplain management, water quality, and natural systems management. In some cases, however, a single performance measure may provide information in more than one area of responsibility. Some performance measures are common to all areas of responsibility. These are discussed separately. This chapter is organized into the following sections:

A. Performance Measures Common to All Areas of Responsibility
B. Performance Measures for Water Supply
C. Performance Measures for Flood Protection and Floodplain Management
D. Performance Measures for Water Quality
E. Performance Measures of Natural Systems Management

Part A. Performance Measures Common to All Areas of Responsibility

Core CM(a): Acres in managed conservation areas acquired by the District

The SFWMD acquired 1,418 acres of conservation lands in FY 2001, bringing the total conservation lands controlled by the SFWMD to 332,240 acres (SFWMD, 2001b). This includes only natural areas, not lands purchased for water resource projects, such as stormwater treatment areas (STAs), East Coast Buffer, etc.

Core CM(b): For District-owned lands: 1) number of management plans required; 2) number of management plans completed; and 3) percentage of management plans completed on schedule

Nearly half the District-owned Save Our Rivers lands are managed by other agencies and preparation of management plans are those agencies' responsibilities. The SFWMD manages approximately 152,000 acres in 11 different projects. Each project requires a management plan. Eight management plans have been completed.

Most Save Our Rivers projects contain multiple parcels that may be acquired over a period of years before enough contiguous tracts are put together to warrant a management plan. Therefore, the SFWMD does not develop specific timelines for management plan preparation. Also, some projects are being considered as wildlife and environmental areas and will be under Florida Fish and Wildlife Conservation Commission management. Prior to opening these areas to hunting, wildlife inventories must be prepared. The preparation of these inventories can further delay the development of management plans.

Core CM(c): Number and percent of land management plan activities being implemented according to plan schedules

In FY 2001, the SFWMD was the lead manager on 11 land management projects. These projects are listed in Table 5. Five-year management plans must be developed for each project. At the end of the five-year period, these plans are updated. Management plans have been developed for all of these projects with the exception of the Kissimmee Chain of Lakes Project.

Management activities that must be implemented for all of these projects are prescribed burning, exotic plant treatment, resource protection (security), public use, and resource inventories (natural and cultural). The five-year management plans do not contain time schedules for these management activities. Instead, annual work plans specify what activities will be undertaken on each management area during each fiscal year. Burning, exotic plant control, resource protection, and public use are ongoing actions that are repeated annually. Inventories are prepared after sizable tracts have been acquired and are only updated to document a restoration activity or significant disturbance. Table 5 indicates what management activities were implemented for each project during FY 2001 (SFWMD, 2000f).

Table 5. Management Activities Being Implemented for SFWMD Land Management Projects

Project Name	Prescribed Burning	Exotic Plant Treatment	Resource Protection (security)	Public Use	Resource Inventories (natural and cultural)
Corkscrew Regional Ecosystem Watershed (CREW)	✓	✓	✓	✓	✓
DuPuis	✓	✓	✓	✓	✓
Everglades Buffer Strip		✓			
Kissimmee Chain of Lakes	✓	✓	✓	✓	✓
Kissimmee River	✓	✓	✓	✓	✓
Lake Marion Creek	✓	✓	✓	✓	✓
Loxahatchee Slough		✓			
Model Lands		✓			
Nicodemus Slough	✓	✓	✓	✓	
Reedy Creek	✓	✓	✓	✓	✓
Shingle Creek	✓	✓	✓		✓

Core CM(d): Acres of land acquired through less-than-fee ownership, on an annual and cumulative basis

The SFWMD has acquired 14,953 acres in less-than-fee ownership since implementation of the Save Our Rivers Program in 1981. Table 6 breaks down the acreage acquired by year.

Table 6. The Acres Acquired in Less-than-Fee Title by the SFWMD Each Year

Year	Acreage
Pre-1990	7,428
1990	1,253
1991	1,214
1992	0
1993	1,868
1994	415
1995	99
1996	1,655
1997	649
1998	144
1999	33
2000	98
2001	97
Total	14,953

Core CM(e): Percentage of environmental resource permits for which compliance inspections were conducted, and of those inspected, percentage found to be in compliance

To determine the number of environmental resource permit compliance inspections conducted during FY 2001 and the percentage of these in compliance, data was gathered from the SFWMD Environmental Resource Compliance Oracle Database, the SFWMD Environmental Resource Compliance Access Database, and SFWMD paper form checklists. The results are as follows:

- Total Inspections
  - The total number of inspections conducted in FY 2001 was 7,170.
  - The number of these inspections that were in compliance for FY 2001 was 5,115.
  - The percentage of inspections found to be in compliance during FY 2001 was 71%.

- Environmental Inspections
  - The number of environmental inspections conducted in FY 2001 was 1,583.
  - The number of these inspections that were in compliance for FY 2001 was 981.
  - The percentage of environmental inspections found to be in compliance during FY 2001 was 62%.

- Engineering Inspections
  - The number of engineering inspections conducted in FY 2001 was 5,587.
  - The number of these inspections that were in compliance for FY 2001 was 4,134.
  - The percentage of engineering inspections found to be in compliance during FY 2001 was 74%.

Part B. Performance Measures for Water Supply

The SFWMD is broken up into four water supply planning areas: Lower East Coast, Lower West Coast, Kissimmee Basin, and Upper East Coast. Figure 1 shows the boundaries of these planning areas. The performance measures utilized to evaluate the effectiveness of water supply provide indications of changes in water demand rates, changes in reused water quantities, as well as activities designed to protect water sources, such as potable water wellfields.

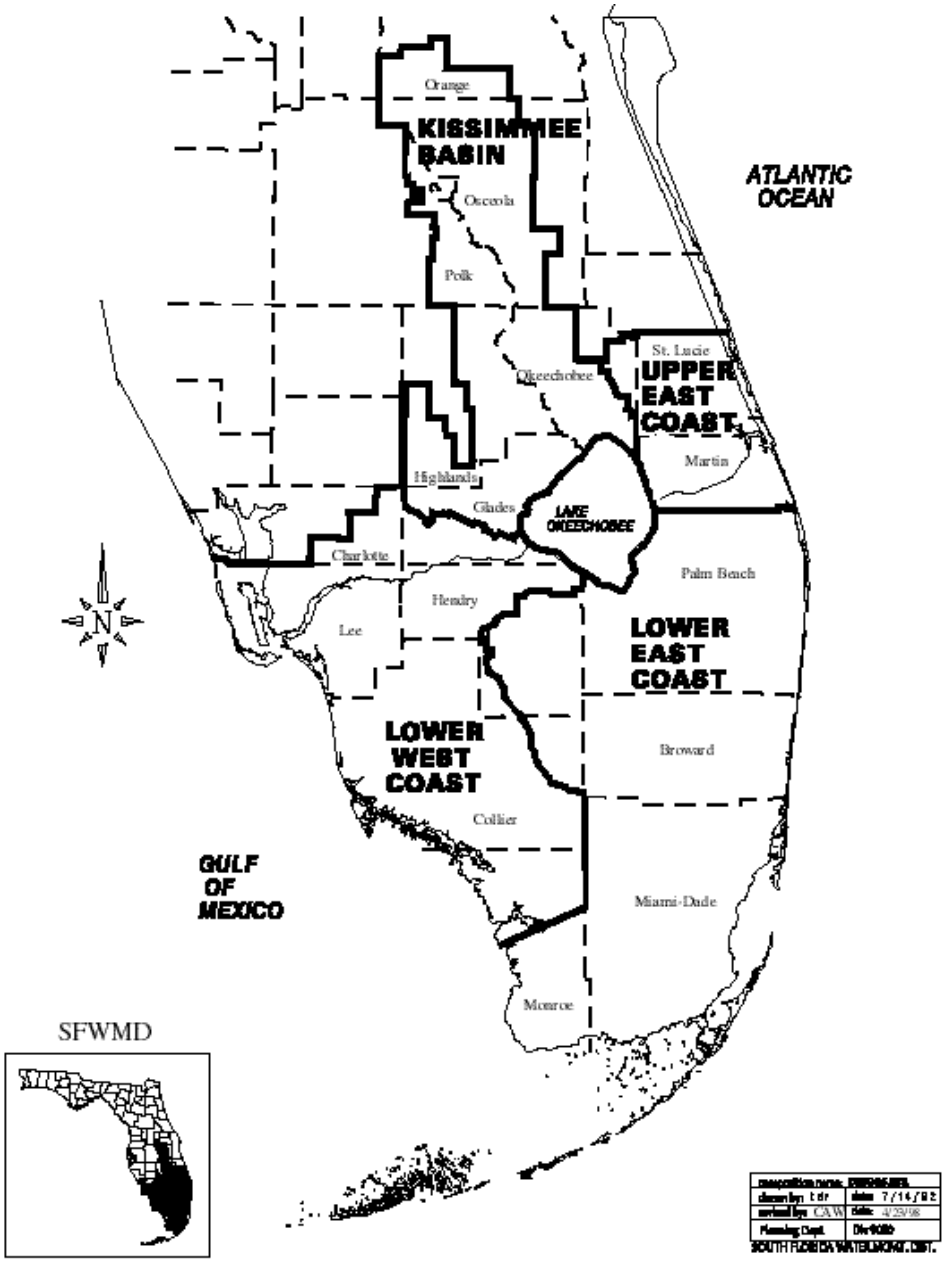

Figure 1. Water Supply Planning Areas within the SFWMD

Core Objective WS 1: Increase available water supplies and maximize overall water use efficiency to meet identified and existing future needs

Core WS 1(a): Percentage of domestic reuse

The percentage of domestic reuse for FY 1999 and FY 2000 for the entire SFWMD and each water supply planning area is presented in Table 7. This data is from the *2001 Reuse Inventory* published by FDEP (FDEP, 2001a). Figure 2 presents the SFWMD's Reuse History.

Table 7. Percentage of Water Reuse in the SFWMD

	1999[a]	2000	Comments
Number of treatment plants	122	116	Total Numbers
Number of reuse systems	118	111	Total Numbers
Wastewater treatment facility (WWTF) capacity	1,013.75 mgd	1,012.26 mgd	
WWTF flow	762.19 mgd	760.92 mgd	
Reuse capacity	326.29 mgd	317.49 mgd	
Reuse flow	180.24 mgd	189.57 mgd	
Percent Reuse SFWMD	24%	25%	Reuse Flow / WWTF Flow
Percent Reuse Lower East Coast	8%	9%	Reuse Flow / WWTF Flow
Percent Reuse Lower West Coast	84%	93%	Reuse Flow / WWTF Flow
Percent Reuse Kissimmee Basin	99%	99%	Reuse Flow / WWTF Flow
Percent Reuse Upper East Coast	44%	40%	Reuse Flow / WWTF Flow

a. Adjusted from the 2000 update of the DWMP to account for duplication

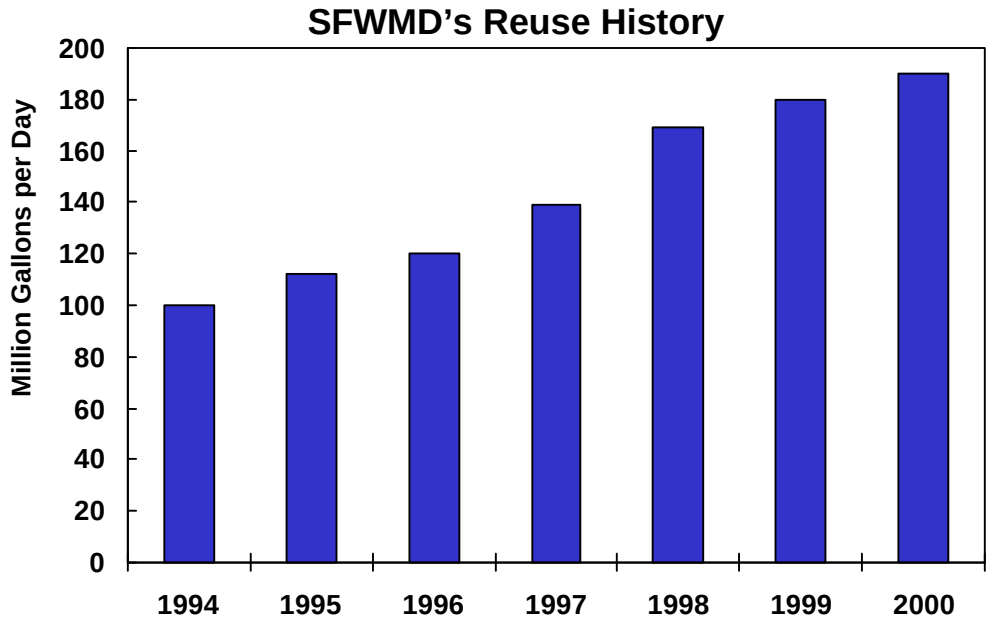

Figure 2. The Reuse History for the Entire SFWMD for 1994 to 2000.

Table 8 presents the capacities and reuse ratios for the SFWMD by water supply planning area for 2000 (FDEP, 2000). The WWTF Capacity is the combined FDEP permitted treatment capacity for all facilities with a capacity of 0.10 MGD or greater. The combined volume of wastewater these facilities treated during FY 2000 is stated in the WWTF Flow column. The Reuse Capacity is the combined permitted reuse capacity of these facilities while the Reuse Flow is the combined volume of reclaimed water that was reused during FY 2000. The Capacity Ratio is the fraction of the treatment capacity that is permitted for reuse while the Flow Ratio indicates the fraction of wastewater treated that was reused during 2000. In 2000, only 25 percent of the wastewater treated was reused, compared to a capacity to reuse in the SFWMD, which was 31 percent.

Table 8. Capacity and Reuse Ratios for the SFWMD by Planning Area for 2000

Planning Area	WWTF Capacity (mgd)	WWTF Flow (mgd)	Reuse Capacity (mgd)	Reuse Flow (mgd)	Capacity Ratio[a]	Flow Ratio[b]
Lower East Coast	770.52	611.37	90.82	56.23	0.12	0.09
Lower West Coast	102.38	67.83	87.55	63.19	0.86	0.93
Kissimmee Basin	107.35	63.56	121.63	62.88	1.13	0.99
Upper East Coast	32.01	18.16	17.50	7.27	0.55	0.40
SFWMD	1,012.26	760.26	317.49	189.57	0.31	0.25

a. Capacity Ratio = Reuse Capacity / WWTF Capacity
b. Flow Ration = Reuse Flow / WWTF Flow

Core WS 1(b): Gross per capita water use (public supply) by District and water supply planning area

An estimate of public water supply per capita used in the SFWMD during 1999 is presented in Table 9 (Marella, 2001). Based on 1,120 mgd of water withdrawn for public supply and a population served of 6.114 million people, the total public water supply per capita for the SFWMD is 183 gallons per day. For some systems, monthly pumpage and population served were not available, but the resulting difference in the total per capita usage is very minor and the omission of this data from the calculation does not impact the total usage. The 20 mgd of water used by the Reedy Creek Improvement District is not included in the Kissimmee Basin or SFWMD totals, as the USGS classified this water as commercial.

Table 9. Gross per Capita Public Water Supply for 1999 for the SFWMD and its Planning Areas

Planning Area/County	Per Capita	Population Served	Pumpage (mgy)
Lower East Coast			
Broward County	170	1,476,400	91,671.3
Dade County	184	2,024,450	136,179.7
Monroe County	189	86,200	5,953.2
Palm Beach County	227	950,000	78,785.3
Lower East Coast Total	189	4,537,050	312,589
Lower West Coast			
Lee County	147	335,000	18,041.5
Collier County	263	185,400	17,819.5
Hendry County (western portion)	175	21,314	1,361.5
Glades County (southern portion)	221	2,900	233.60
Lower West Coast Total	188	544,614	37,456
Kissimmee Basin			
Glades County (northern portion)	100	1,400	51.4
Highlands County (eastern portion)	140	3,350	171.6
Okeechobee County (western portion)	89	20,500	1,337.1
Orange County (southern portion)	279	178,272	18,147.8
Osceola County (western portion)	231	112,200	9,446.2
Polk County (eastern portion)	162	12,600	743.8
Kissimmee Total[a]	249	328,322	29,898
Upper East Coast			
Martin County	203	77,400	5,750.8
St. Lucie County	139	117,600	5,978.0
Upper East Coast Total	165	195,000	11,729
District Total[a]	183	6,114,000	391,672

a. Excludes Reedy Creek Improvement District, which the USGS classifies as commercial.

Core WS 1(c): Within each water supply planning region: 1) the estimated amount of water supply to be made available through the water resource development component of the regional water supply plan; 2) percent of estimated amount under development; and 3) percent of estimated amount of water actually made available

Table 10 presents the amount of water that was estimated to be made available through the water resource development components of the regional water supply plans (SFWMD, 1998, 2000b, 2000c, 2000e), the percent of this estimated water that has been made available, and the estimated amount that was under development as of October 1, 2001.

Table 10. Amount of Estimated Water Made Available and Under Development

Water Supply Planning Region	Water to Be Made Available (mgd)	Percent of Estimated Water Under Development as of October 1, 2001	Percent of Estimated Water Actually Made Available as of October 1, 2001
Lower East Coast	Not available	Not available	Not available
Lower West Coast	541	52%	21%
Upper East Coast	280	51%	14%
Kissimmee Basin	390	34%	0
Total Quantity Made Available	Not available	Not available	Not available

Core WS 1(d): Within each water supply planning region, the estimated additional quantities of water supply made available through District water supply development assistance

Table 11 presents the estimated additional quantities of water supply that was made available through District water supply development assistance in 2000 and 2001. It also presents the estimated amount to be made available in 2002. This data was obtained from Alternative Water Supply Applications filed in 2000, 2001, and 2002, and from the *Proposed Water Resource Development Work Program, Fiscal Years 2001-2005* (SFWMD, 2001c).

Table 11. Amount of Additional Water Made Available in 2000 and 2001 and Estimated to be Made Available in 2002 through District Water Supply Development Assistance

	Water Made Available (mgd)		Water Estimated to be Made Available (mgd)
Planning Area	2000	2001	2002
Lower East Coast	17.96	10.35	26.38
Lower West Coast	23.8	38.74	19.00
Upper East Coast	9.11	0.00	2.17
Kissimmee Basin	0.00	0.00	0.00
Total	50.87	49.09	47.55

Core Objective WS 2: Prevent contamination of water supplies

Core WS 2(a): Percentage of surface water supply sources for which water quality attains the designated use

The total number of surface water supply sources located within the SFWMD is 61. According to the *2000 305(b) Report* published by the FDEP in 2001 (FDEP, 2001b), 33% of these sources have good water quality ratings, 59% have fair water quality ratings, and none have poor water quality ratings. Five of the sources, the Marco Lakes, are not in the FDEP database and, therefore, were not taken into consideration.

Table 12. Percentage of Good, Fair, and Poor Water Quality Rations for Surface Water Supply Sources

Water Quality Rating	Number of Sources	Percentage of Total
Good	20	33 %
Fair	36	59 %
Poor	0	0 %
Not in FDEP database (Marco Lakes)	5	8 %
Total	**61**	

SFWMD WS 2(b): Percentage of public water supply wellheads subject to wellhead protection ordinances

Table 13 indicates what counties had wellhead protection ordinances and the number of public water supply wells within each county during 2000 and 2001. Local government authorities in Monroe, Glades, Osceola, and Okeechobee Counties verified that wellhead protection ordinances did not currently exist as of December 12, 2001. The number of public water supply wells in each county was obtained from SFWMD service centers and the SFWMD permit database. The percentage of public water supply wellheads subject to wellhead protection ordinances is calculated from this information.

In 2000, the SFWMD had 2,752 public water supply wells within its boundaries. Of these 92 percent (2,528) are within counties that have wellhead protection ordinances, and 8 percent (224) are in counties that do not.

In 2001, the SFWMD had 2,885 public water supply wells within its boundaries. Of these 91 percent (2,641) are within counties that have wellhead protection ordinances, and 9 percent (244) are in counties that do not have wellhead protection ordinances.

Table 13. Number of Public Water Supply Wellheads Subject to Wellhead Protection Ordinances

Counties	2000		2001	
	Wellhead Protection Ordinances?	Number of Public Water Supply Wells	Wellhead Protection Ordinances?	Number of Public Water Supply Wells
Palm Beach	yes	605	yes	626
Broward	yes	394	yes	424
Miami-Dade	yes	255	yes	281
Monroe	no	0	no	0
Glades	no	20	no	20
Hendry	yes	40	yes	41
Lee	yes	393	yes	362
Collier	yes	165	yes	201
Charlotte	yes	24	yes	24
St. Lucie	yes	234	yes	210
Martin	yes	246	yes	297
Orange	yes	131	yes	129
Osceola	no	136	no	156
Polk	yes	19	yes	23
Highlands	yes	22	yes	23
Okeechobee	no	68	no	68
Total		2,752		2,885

Part C. Performance Measures for Flood Protection and Floodplain Management

Flood protection within the SFWMD is provided through both the facilities of the C&SF Protect and by limiting land uses within identified flood prone areas. Floodplain management is achieved by protecting and restoring natural features of floodplains.

Core Objective FP 1: Minimize damage from flooding

Core FP 1(a): Percentage of District works maintained on schedule

According to the SFWMD's Water Resources Operations Industrial Engineering Unit quarterly reports, 78,090 District works tasks were planned for FY 2001, and 66,180 tasks were completed. The percentage of District works that were maintained on schedule is 85%. This information was found in the SFWMD Computerized Maintenance Management System.

SFWMD FP 1(b): Number and cost of stormwater retrofit projects carried out by the District

Table 14 presents the number and cost of stormwater retrofit projects carried out by the District in FY 2001. This information was obtained from the SFWMD service centers.

Table 14. Number and cost of SFWMD Stormwater Retrofit Projects in FY 2001

Service Center	Ad Valorem Funds		Pass Through Funds	
	Number of Projects	Cost	Number of Projects	Cost
Broward	0	$0	0	$0
Keys	0	$0	1	$200,000
Fort Myers	0	$0	0	$0
Martin/St. Lucie	0	$0	4	$200,000
Miami	0	$0	1	$500,000
Okeechobee	0	$0	0	$0
Orlando	0	$0	0	$0
Palm Beach	0	$0	0	$0
Total	0	$0	6	$900,000

SFWMD FP 1(c): Average number of days to complete environmental resource permit review and issue a permit once the application is complete

The average number of days to complete a review of an application and issue a permit in FY 2001 once the application is complete was 68.8 days for individual permits and 38.3 days for general permits. These numbers do not include projects that are on extended waiver by the applicants. This information was obtained from the SFWMD's Permit Application Tracking System (PATS).

SFWMD FP 1(d): Number of permit applications received

The number of environmental resource permit and surface water permit applications received in FY 2001 was 1,562. This information was obtained from PATS.

SFWMD FP 1(e): Number of preapplication inspections

The number of environmental resource permit preapplication reviews conducted in FY 2001 was 213. This information was obtained from the PATS.

SFWMD FP 1(f): Number of permits issued

The number of environmental resource permits and surface water permits that were issued in FY 2001 was 1,577. This information was obtained from the PATS.

Core Objective FP 2: Promote nonstructural approaches to achieve flood protection, and to protect and restore the natural features and functions of the 100-year floodplain

Core FP 2(a): Number of acres identified for acquisition to minimize damage from flooding and the percentage of those acres acquired

Table 15 presents the Save Our Rivers projects that have been identified by the SFWMD to minimize flooding. The total project size is presented along with the number and percentage of total acres acquired by the end of FY 2001. This data was obtained from the *Save Our Rivers Land Acquisition and Management Plan* (SFWMD, 2000f) and the ATLAS data base.

Table 15. Save Our River Projects Identified to Minimize Flooding

Project	Project Size (acres)	Total Acres Acquired	Percent Acquired
Corkscrew Regional Ecosystem Watershed (CREW)	58,528	24,965	43
East Coast Buffer	66,809	28,923	43
Kissimmee Chain of Lakes	33,919	27,396	81
Lake Marion Creek	17,300	6,736	39
Loxahatchee Slough	1,425	1,425	100
Nicodemus Slough	2,219	2,219	100
Reedy Creek	30,000	5,900	20
Shingle Creek	7,655	1,322	17
Water Conservation Area (WCAs)	855,680	787,982	92[a]
Total	1,073,535	886,868	83%

a. 100% of the flowage easements has been acquired for the WCAs

Part D. Performance Measures for Water Quality

The SFWMD has many programs that monitor and improve surface and ground water quality within its boundaries. Several of these are coordinated with other agencies.

Core Objective WQ 1: Protect and improve surface water quality

Core WQ 1(a): Percentage of water segments that fully meet, partially meet, and do not meet their designated uses

Table 16 presents the percentage of water segments within the SFWMD boundaries that fully meet, partially meet, or do not meet their designated uses. These percentages were obtained from the *2001 305b Report* (FDEP, 2001b).

Table 16. Percentage of Water Segments in the SFWMD that Fully Meet, Partially Meet, and Do Not Meet Their Designated Uses

Status	Estuary	Lake	Stream
Meets	80%	3%	43%
Partially meets	15%	97%	52%
Does not meet	5%	0%	5%

Core WQ 1(b): Number of and percentage of SWIM and SFWMD priority water bodies for which pollutant load reduction goals (PLRGs) have been established (SWIM water bodies must have an approved SWIM plan)

Pursuant to Section 373.453, F.S. and Section 62-43.030, F.A.C., SFWMD staff reviewed the approved SWIM Priority List for South Florida to determine whether it needed to be updated. It became clear that the adopted list was no longer reflective of current funding and policy conditions as demonstrated by the following facts:

- SWIM Plans have been approved and adopted for Lake Okeechobee, Biscayne Bay, and the Indian River Lagoon.
- The Everglades Forever Act and the CERP will address the Everglades and associated regions.
- The Lake Okeechobee Protection Bill identifies the Kissimmee Upper Chain of Lakes as an area for surface water improvements.
- Sufficient resources are not available to develop new SWIM plans.
- Little funding is being provided for SWIM projects.

- The current legislative specific appropriation process does not require an approved SWIM plan to allocate funds for surface water restoration projects.

An update of the prioritization effort was needed to incorporate three additional important aspects of the status of a water body: 1) the readiness of local governments to participate financially in implementing restoration projects; 2) the emergence of significant restoration and preservation programs (i.e., CERP, Preservation 2000, and Florida Forever); and 3) the presence of nongovernmental organizations who have developed a broad public support for restoration of a particular water body.

District staff developed a ranking process that used the original SWIM criteria and three additional criteria to address the factors above. The process resulted in a new "SFWMD Water Body List" that is presented in Table 17. The list will be used to guide District endorsement of locally sponsored restoration projects seeking a legislative appropriation and District projects funded with ad valorem dollars. Within each tier, each water body is considered of equal priority.

Table 17. SFWMD Priority Water Body List as of September 2001

Tier 1 • Biscayne Bay • Florida Keys • Lake Istokpoga • Lake Okeechobee • Loxahatchee River • St. Lucie Estuary
Tier 2 • Caloosahatchee Estuary • Estero Bay • Florida Bay • Indian River Lagoon • Lake Worth Lagoon • Naples Bay / Gordon River • Rookery Bay / Marco
Tier 3 • Lake Arbuckle • Lake Butler • Lake Weohyakapka • Pine Island Sound / Matlacha / Ding Darling • Upper Kissimmee Chain of Lakes

Core WQ 1(c): Percentage of total stream miles and lake and estuary area in the District assessed for ambient water quality

Table 18 presents the total stream miles and the total lake and estuary area within the SFWMD boundaries, along with the miles or square miles and percentage assessed. This information was obtained from the *2001 305b Report* (FDEP, 2001b).

Table 18. Total Stream Miles and Lake and Estuary Area in the District Accessed for Ambient Water Quality

System Type	SFWMD Miles	SFWMD Square Miles	Assessed Miles	Assessed Square Miles	Percentage Assessed
Estuary	929.3		928.2		99.9%
Lake		677.3		676.3	99.9%
Stream		1,724.3		1,590.6	92.2%

SFWMD WQ 1(d): Number of SWIM plans being implemented according to SWIM plan schedules

Three SWIM Plans have been approved: Indian River Lagoon, Lake Okeechobee, and Biscayne Bay. According to SFWMD's SWIM plan project managers, all three are being implemented on schedule.

SFWMD WQ 1(e): Number and percentage of permitted systems inspected through the Environmental Resource Permitting (ERP) Program, and percentage of those inspected found in compliance with permit conditions

The number and percentage of permitted systems inspected through the ERP Program, and the percentage of those inspected found in compliance with permit conditions is discussed in Part A of this chapter, under the performance measure Core CM(e).

Core Objective WQ 2: Protect and improve ground water quality

Core WQ 2(a): Improving, degrading, and stable trends in ground water quality

The FDEP did not include data on improving, degrading, and stable trends in ground water quality in the *2001 305(b) Report*.

Core WQ 2(b): Improving, degrading, and stable trends in nitrate concentrations in springs

The SFWMD has no springs within its boundaries.

Part E: Performance Measures for Natural Systems Management

The SFWMD is preserving, enhancing, and restoring the water resource-related natural systems within its boundaries. Native ecosystems, along with their water resource-related functions, are being preserved. Also, altered ecosystems are being restored, where appropriate, along with their resource-related functions.

Core Objective NS 1: Maintain the integrity and functions of water resources and related natural systems

Core NS 1(a): Number and percentage of established minimum flows and levels (MFLs) being maintained, consistent with established recovery or prevention strategies

The SFWMD established MFLs for the Everglades, Lake Okeechobee, the Biscayne Aquifer, Lower West Coast aquifer systems, and the Caloosahatchee Estuary on September 10, 2001. Data to determine how well these MFLs are being met have not yet been compiled or analyzed. In most cases, five to ten years worth of data will be needed to determine how well the MFLs are being maintained.

Core NS 1(b): Number of MFLs, by water body type, established annually and cumulatively

The SFWMD established five MFLs on September 10, 2001. These included one wetland (the Everglades), one lake (Lake Okeechobee), one estuary (the Caloosahatchee Estuary), and two aquifers (the Biscayne Aquifer and the Lower West Coast Aquifer System).

Core NS 1(c): Percentage of MFLs established in accordance with the previous year's schedule

The schedule for establishing MFLs is presented in Table 19. This list is published pursuant to Section 373.042(2), F.S. "Establishment" of a minimum flow or level, as provided in this list, is the publication of the notice of intended rule adoption in the Florida Administrative Weekly pursuant to Section 120.54(3)(a), F.S. The SFWMD will voluntarily conduct independent scientific peer reviews of MFL criteria for all water bodies on the above list, pursuant to Section 373.042(4), F.S. Several new water bodies have been added to the list: the Southern Coastal Biscayne Aquifer, Estero Bay, the Water Table Aquifer, and the Lake Butler Chain of Lakes.

Table 19 also indicates whether the MFLs were completed on schedule and what year they were established. The MFL criteria for five water bodies were scheduled for establishment in 2000. These water bodies were Lake Okeechobee, the Everglades, the Caloosahatchee River and Estuary, the Biscayne Aquifer, and the Lower West Coast Aquifer System. None were established by the scheduled completion date. The establishment of MFLs was delayed until September 2001 to provide adequate consideration for other ongoing management planning activities in these systems and to address concerns expressed by the Governing Board, other agencies, and affected parties.

According to the 2001 schedule, MFLs were to be established for the Loxahatchee River and Estuary and the St. Lucie River and Estuary during 2001. Technical documentation to support these MFLs was developed and rule development was initiated during 2001, but the final rules for these water bodies will not be completed until 2002.

Lake Istokpoga currently operates on a regulation schedule based on minimum levels. The District will revisit these existing minimum levels upon completion of the USACE's regulation schedule study due in 2004.

Table 19. Schedule for the Establishment of MFLs

Priority Water Bodies	Year Scheduled for Establishment	Year Established	
		2000	2001
Lake Okeechobee	2000	no	yes
Everglades	2000	no	yes
St. Lucie River and Estuary	2001		no
Biscayne Bay	2004		
Florida Bay	2003		
Loxahatchee River and Estuary	2001		no
Southern Coastal Biscayne Aquifer	2004		
Caloosahatchee River and Estuary	2000	no	yes
Estero Bay	2006		
Water Table Aquifer	2004		
Lower West Coast Aquifer	2000	no	yes
Kissimmee River	2006		
Lake Kissimmee	2006		
Lake Tohopekaliga	2006		
East Lake Tohopekaliga	2006		
Alligator Lake	2006		
Lake Jackson	2006		
Lake Rosalie	2006		
Cypress Lake	2006		
Lake Hatchineha	2006		
Lake Pierce	2006		
Lake Marian	2006		
Fish Lake	2006		
Lake Istokpoga	2004		
Lake Butler Chain of Lakes	2008		
Floridan Aquifer	2004		

Core NS 1(d): Total acres of wetlands or other surface water authorized by environmental resource permit to be impacted and acres required to be created, enhanced, restored, and preserved

According to the PATS system, the status of wetlands authorized to be impacted by an environmental resource permit is as follows:

- Existing ERP wetlands - 22,604 acres:
- Impacted – 3,181 acres
- Preserved/Enhanced - 15,805 acres (does not reflect acres of "undisturbed" wetlands)
- Created/Restored - 1,721 acres
- Upland Compensation - 8,688 acres
- Total Preserved/Created/Uplands – 26,125

SFWMD NS 1(e): Acres of wetlands preserved as a percent of wetland acres reviewed through ERP applications; acres of wetlands reviewed; acres of wetlands impacted; acres of wetlands preserved; and acres of wetlands mitigated (may include wetlands preserved on-site)

Using the numbers presented under SFWMD NS 1(d), the following percentages were calculated:

- Preserved/created as a percent of wetland acres reviewed = 77.5% (15,805 + 1,721/22,604)
- Impacted as a percent of wetland acres reviewed = 14.1% (3,181/22,604)
- Total acres of mitigation as a percent of wetlands impacted = 824% (26,215/3,181)

Core Objective NS 2: Restore degraded water resources and related natural systems to a naturally functioning condition

Core NS 2(a): Acres of invasive nonnative aquatic plants in inventoried public waters

The acres of invasive nonnative aquatic plants in public waters were inventoried by the FDEP in FY 2001. It was discovered that these plants covered a total of 25,082 acres within the SFWMD's boundaries. The acreage covered by each species is as follows:

- Hydrilla - 24,442 acres
- Water Hyacinths - 303 acres
- Water Lettuce - 132 acres
- Hygrophila - 205 acres

Core NS 2(b): Acres of District managed lands infested with invasive nonnative upland plants by degree of land coverage

Table 20 presents the status of exotic plant control on SOR lands managed by the SFWMD as of April 2002. The acres of lands managed by the SFWMD that were infested with invasive nonnative upland plants was 21,300 acres. The number of acres within the lands managed by the SFWMD requiring low, medium, and high maintenance to control exotics is 80,184, 23,500, and 19,300 acres, respectively.

Table 20. Status of Exotic Plant Control as of April 2002

Area	Total Acres	Infested Acres	Low Maintenace	Medium Maintenance	High Maintenance
West Coast Region					
CREW	25,000	500	20,000	3,500	1,000
East Coast Region[a]					
DuPuis	21,875	0	12,975	8,500	400
Everglades					
Model Lands	13,000	800	6,150	4,150	1,900
Kissimmee/Okeechobee Region					
Kissimmee River	43,000	20,000	3,000	5,000	15,000
Upper Lakes Region					
Lake Marion Creek	10,223	0	10,223	0	0
Lower Reedy Creek	5,500	0	4,500	1,000	0
Upper Reedy Creek	5,000	0	4,950	50	0
Shingle Creek	1,600	0	1,300	300	0
Upper Chain	19,086	0	17,086	1,000	1,000
TOTAL	144,284	21,300	80,184	23,500	19,300

a. West Jupiter Wetlands and South Fork are now managed by other agencies.

Core NS 2(c): Acres of District-owned lands identified in land management plans as needing restoration, acres undergoing restoration, and acres with restoration activities completed

The status of Save Our Rivers restoration projects as of the end of 2001 is presented in Table 21.

Table 21. Save Our Rivers Restoration Projects as of the End of 2001

Needing Restoration		Undergoing Restoration		Restoration Complete	
Area	**Acres**	**Area**	**Acres**	**Area**	**Acres**
East Coast Buffer	77,259	Indian River Lagoon	397	DuPuis Reserve	21,875
New Palm Dairy	1,900	Loxahatchee Slough	1,425	Rattlesnake Hammock	500
Shingle Creek	950	Kissimmee River	27,000	Johnson Island	1,735
		Loxahatchee River	515		
		Corkscrew Regional Ecosystem Watershed (CREW)	4,670		
Totals	80,109		34,007		24,110

SFWMD NS 2(d): Acres of land infested with invasive nonnative upland plants, by species inventoried

The most recent survey of land infested with invasive nonnative upland plants was conducted in 1999. The results were as follows:

- Melaleuca - 359,000 acres
- Brazilian Pepper - 1,024,000 acres
- Australian Pine - 385,000 acres
- Old World Climbing Fern - 107,000 acres
- Lather Leaf - 6,500 acres
- Burma Reed - 15,000 acres

SFWMD NS 2(e): Acres of cattail coverage relative to District 1995 aerial photo maps

The last survey of acreage of cattail coverage was performed in 1995 (Rutchey and Vilchek, 1995). Data collection and analysis will be conducted again in 2002. The results for 1991 and 1995 are presented in Table 22.

Table 22. Cattail coverage in Water Conservation Area 2A

Year	Cattail (acres)	Cattail Dominant Mix (acres)	Cattail Sparse Mix (acres)
1991	1,041	5,650	6,819
1995	4,066	9,742	9,193

SFWMD NS 2(f): Percent increase in wading bird populations as measured by systematic reconnaissance flights

Table 23 presents the number of nesting birds documented in the Everglades during systematic reconnaissance flights for five characteristic species. These species are the Great Egret, the Snowy Egret, the Tricolored Heron, the White Ibis, and the Wood Stork. A 39% increase in the three-year running average of nesting pairs was documented in 2001 over the three-year running average for 2000 (Ogden, 2001).

Table 23. The Number of Nesting Birds in the Everglades Basin for Five Characteristic Species

Species	1997 - 1999	1998 - 2000	1999 - 2001	Target
Great Eagret	5,084	5,544	5,996	4,000
Snowy Egret and Tricolored Heron	1,862	2,788	4,270	10,000 - 20,000
White Ibis	5,100	11,270	16,555	10,000 - 25,000
Wood Stork	279	863	1,538	1,500 - 2,500